

ABSTRACT OF THE DISCLOSURE

Gaseous coolant, preferably helium, flows from coolers 12 past the winding overhangs 7 of the stator 3, then through cooling channels in the rotor 1, then into the rotor/stator gap 4, then through cooling ducts in the stator core 6 into a coolant receiving region 11, and then through the coolers 12. The coolant flow is preferably caused solely by the rotor auto-ventilation effect.